

CLAIMS

1. ~~A transceiver device implantable in a human body comprising:~~
- 5 a triggerable radio frequency transmitter,
 a power source for powering said transmitter,
 triggering means for activating said transmitter
 means,
- receiver means allowing the detection of an
externally generated information signal, and
- 10 an antenna for effectively radiating RF energy
 from said transmitter to produce an identifiable RF
 signal for a period of time following activation by
 said trigger means.

Sub 2

2. The transceiver of Claim 1, wherein said triggering means comprises an electromechanical device having a binary output.

3. The transceiver of Claim 1, wherein said triggering means comprises an electromechanical device having a binary output, a digital decoder for detecting predetermined time-encoded information in the binary output of said electromechanical device and for providing an electrical trigger signal representative of the presence of such pre-determined information,
said trigger signal causing the activation of said transmitter.

4. The transceiver of Claim 1, wherein said triggering means comprises a wave receiver for receiving a transmitted wave, and
a signal decoder responsive to information in an incoming wave signal for providing an electrical trigger signal representative of the presence of the information,
said trigger signal causing the activation of said transmitter means.

5. The implantable device of Claim 2, wherein said triggering means additionally comprises a sustainable power supply comprising means for picking up periodically available external energy without external electrical contact, storing said energy for use over time, such that the resultant stored energy is sufficient to power the wave receiver means with enough regularity to ensure proper detection of information on said incoming wave signal.

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Sub 3
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6. ~~The device of Claim 2, wherein said electromechanical means include threshold-detection circuitry.~~

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7. ~~The device of Claim 3, wherein said signal decoder allows input from more than one source of binary information.~~

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8. ~~The device of Claim 3, further comprising means for providing a perceivable stimulus in response to one output from said decoding means.~~

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9. ~~The device of Claim 3, wherein said signal decoder provides a plurality of outputs in response to a plurality of different pre-determined information patterns.~~

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10. ~~The device of Claim 3, further comprising means for providing a perceivable stimulus in response to one output from said decoding means.~~

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11. ~~The transceiver of Claim 3, further comprising sensory stimulus means for providing a noticeable stimulus to alert the human in whom the device is implanted that the all or part of said predetermined information signal has been detected by said detector means.~~

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12. ~~The transceiver of Claim 3, further comprising a charging regulator for maintaining the power source used to power the transmitter at a state of peak charge.~~

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13. ~~The device of Claim 3, wherein said digital decoding means allow input from more than one source of binary information.~~

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14. ~~The device of Claim 3, wherein said digital decoding means provide a plurality of outputs in response to a plurality of different pre-determined information patterns.~~

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15. ~~The transceiver of Claim 8, wherein said wave receiver means comprises analog circuitry for amplifying the electrical field associated with the contraction of the human heart, and said detecting means comprises means for detecting the lack of a regular heartbeat.~~

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16. ~~The transceiver of Claim 4, further comprising sensory stimulus means for providing a noticeable stimulus to alert the person in whom the device is implanted that the all or part of said predetermined information signal has been detected by said detector means.~~

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17. ~~The transceiver of Claim ²1, further comprising a charging regulator for maintaining the power source used to power the transmitter at a state of peak charge.~~

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18. The transceiver of Claim 5 wherein said external energy pickup comprises an inductive pickup, for converting magnetic energy to electrical energy.

8¹⁹. The transceiver of Claim 5 wherein said external energy pickup comprises an electromechanical means for converting mechanical work of the body into electrical energy.

5 20. ~~The transceiver of Claim 18, wherein said inductive pickup means are placed close to the surface of the body of the individual in which it is implanted.~~

suba⁸
9²¹. The transceiver of Claim ⁸~~18~~, wherein said
10 mechanical work is supplied by muscle tissue in the body of the human in which the device is implanted.

22. ✓ A system for tracking and recovering of humans
in distress, comprising at least one triggerable
transmitter implanted in a human being, said
transmitter uniquely triggerable to transmit radio
5 frequency beacon signals in response to being
triggered, and

a network of receivers sensitive to said radio
frequency beacon signals being capable of deriving
positional information concerning the source of said
10 signals.

23. The system of Claim 22, where the radio frequency is in the 173.075 MHz band.

24. The system of Claim 22, where the radio frequency is in the 460 MHz band.

5 25. The system of Claim 22, further comprising a plurality of mobile receivers sensitive to said radio frequency beacon signals for providing finer positional accuracy in determining the location of the source of said radio frequency beacon.

26. A system for tracking and recovering humans in distress, comprising;

a plurality of triggerable transceivers implanted each in a human being,

5 each transceiver having a transmitter and a receiver, any one of said transmitters of said transceivers uniquely triggerable to transmit a radio frequency beacon signal after the receiver of said transceiver receives a predetermined radio frequency information signal,

10 a network of trigger transmitters and receivers, each being sensitive to said radio frequency beacon signal and capable deriving positional information concerning the source of said beacon signal, and

15 said transmitters being capable of transmitting a plurality of uniquely identifiable radio frequency information signals, capable of uniquely triggering one of the plurality of implanted radio transceivers.

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27. ~~The system of Claim 26, further comprising a plurality of mobile receivers sensitive to said radio frequency beacon signals for providing finer positional accuracy in determining the location of the source of said radio frequency beacon.~~

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